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ABSTRACT

Currently, three theories of learning dominate classroom practice. First, B.F. Skinner's Theory of Operant Conditioning states that if behavior, including learning behavior, is reinforced, the probability of its being repeated increases strongly. Different types and schedules of reinforcement have been studied, by Skinner and others, and the programmed instruction system has resulted. This has yielded some success, but other research has shown that efforts to reinforce responses do not always work with all students. Second, Kurt Lewin's Cognitive Field Theory defines reality as the interpretations a person makes of self and surroundings as he or she interacts with them. Doing must be accompanied by a realization of the consequences and, thus, a teacher should be most concerned with producing personal involvement in the students, helping them to see a need to learn. Unfortunately, despite some helpful implications for teaching, Field Theory has little value in predicting what learning will occur under what conditions. Finally, Jean Piaget's Theory of Cognitive Development holds that thinking develops in a sequence of stages. Since it is assumed that children reason differently from adults, the teacher must try to see things from the child's point of view, which involves the difficult task of assessing the level and type of thinking of each child. Skinner, Lewin, and Piaget differ in their basic assumptions, but their work can be of great use to the teacher who employs common sense and the knowledge gained from classroom experience. (KH)

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THREE THEORIES OF LEARNING

AND THEIR IMPLICATIONS FOR TEACHERS

by

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THREE THEORIES OF LEARNING AND THEIR IMPLICATIONS FOR TEACHERS

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Introduction

Teachers have been aware that learning in school is often highly inefficient. Encouraged by administrators, parents and even the government, teachers have been trying new approaches, techniques or materials and discarding them even before feeling comfortable in their use. Behaving blindly, without conviction of why those should be used, teachers usually have been playing the game of follow the leader. But teaching is an activity which should emerge from some conception about how learning occurs. A thorough understanding of the psychological theories that have motivated the trends in education during the past decades would most certainly provide the light necessary to guide their way.

Learning has been defined as "the process by which people acquire changes in their behavior, improve performance, reorganize their thinking or discover new ways of behaving and new concepts and information".[1] A given theory of learning implies a set of classroom practices. The curriculum, materials and instructional techniques used in the teaching-learning situation depend on the theory. Different psychological theories view man and learning from different positions, but if the teacher is to apply effectively psychological

[1] Henry Clay Lindgren, *Educational Psychology in the Classroom*, 4th. ed. (New York: John Wiley and Sons, Inc., 1972), p. 6.

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principles in his/her classroom, he/she must become knowledgeable in the various conflicting theories.

After familiarizing himself/herself with various theories, the teacher is in a position of being able to perceive learners learning situations in new and different ways, having developed points of view different from the one he/she had. Being able to examine a problem from a variety of aspects will give him/her the advantage of having several approaches that might be used. The teacher becomes more conscious of the implications of his/her behavior and of the events that take place in the classroom and in the lives of the students.

In this paper three current theories of learning will be examined: B.F. Skinner's Operant Conditioning, Kurt Lewin's Cognitive Field and Jean Piaget's Cognitive Development. Their major assumptions will be discussed, as well as their implications for elementary school education. It is hoped that it will help to clarify misconceptions in the minds of elementary school teachers regarding some of the practices advocated in our schools and will broaden their views of children and how they learn.

Part I

B.F. Skinner: Operant Conditioning

Since ancient times philosophers have tried to look for the origin of knowledge. Some have seen man as a passive organism governed by stimuli supplied by the external environment. In this view, knowledge comes to man from outside himself. Others consider man to be the source of all acts and the acquisition of knowledge is seen as private internal action, either spontaneous, or resulting from interaction with the environment.

B.F. Skinner, an adherent of the behavioristic or stimulus response view, after performing laboratory experiments with rats and pigeons, developed his Operant Conditioning Learning Theory. His main assumption states that an organism will respond to the environment and, by reinforcing the behavior, the probability of this response occurring again will be strengthened. The important stimulus is the one immediately following the response, not the one preceding it. Thus, randomly occuring actions can be made into reliable, controllable responses or regularly recurring actions. Even brand new actions that would never occur spontaneously can be taught by a gradual

process of shaping the behavior through the use of reinforcers.

Behavior can not and should not be explained by looking inside the organism for motives according to Skinner. Instead of saying that a person behaves because of the consequences that are to follow his behavior (purpose or goal), Skinner states that he behaves thus because of the consequences that have followed similar behavior in the past (conditioning).[2] To him a learner perceives the external world just as if a photograph were taken or he/she was looking in a mirror. Behavior is not affected by the individual's perception or by "seeing" a connection between an action and a reinforcer. In discussing one of his laboratory experiments, he says: "The statement that the bird learns that it will get food by stretching its neck is an innacurate report of what has happened".[3] To Skinner what is important is that the bird will stretch its neck more frequently and this proves that learning occured.

Learning is a change of behavior that can be observed. A learner is to be molded in the proper fashion just as you would teach a dog to perform some tricks. If teachers want to produce a particular behavior in their students, they must plan for it to occur and then reinforce it. In the same manner, an undesirable behavior can be extinguished by not reinforcing it. Reinforcers can be either positive or negative. A positive reinforcer strengthens the probability of a response when it is added to a situation, while a negative one strengthens response probability when it is removed from the situation. Punishment is not a negative reinforcer, since it is intended to decrease response probability. Although punishment seems to be the opposite of reward, it does not have opposite effects. An organism can be induced to learn new forms of behavior through being rewarded, but it is not likely to learn new behavior merely because other alternatives are punished.[4] Skinner disapproves of aversive control or punishment and emphasizes reinforcement as the principal factor of learning.

Different schedules of reinforcement have been studied as well as different types. Skinner (1953) and Thomas J. Ryan (1968) found that people seem to work harder (make more responses) if they are reinforced only part of the time according to an irregular and, for them,

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[2] Morris L. Bigge, *Learning Theories for Teachers*, 3rd. ed. (New York: Harper and Row, Publishers, 1976), p. 123.

[3] B.F. Skinner, *Science and Human Behavior* (New York: MacMillan, 1953), p. 64.

[4] Lindgren, p. 194.

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unpredictable schedule.[5] Ellis Batten Page in 1958 did research on the effect of teacher comments on the work of students and concluded that expression of teacher interest has reinforcing value in and of itself.[6] In other instances, a student who discovers his/her answers are correct acts as a reinforcer. Schedules of reinforcement work best on a person to person basis.

Skinner believes the aims of psychology are the control and prediction of human behavior and operant conditioning permits this to occur. He proposes the use of reinforcement techniques in controlling various kinds of disruptive behavior in the classroom or behavior modification. He has noticed that behavior in school is dominated by aversive controls and reinforcement of desired behavior occurs infrequently with an excessive time lapse between behavior and reinforcement in most instances. As an alternative, he recommends behavior modification and programmed instruction.

Programmed instruction is a system of teaching and learning that consists of pre-established subject matter that is broken down into small, discrete steps and carefully organized into a logical sequence. Each step builds deliberately upon the preceding one. The learner can progress through the sequence of steps at his own rate and is reinforced immediately after each step by correcting his own answer. It may be accomplished with or without the use of teaching machines. According to Skinner, not only factual information, but skills and even thinking, can be taught efficiently in this way. All that is needed is a good program.

Skinner's enthusiasm with programmed instruction has not been substantiated by research. Shirley Curran Lublin (1965), Marianne Roderick and Richard C. Anderson (1968), among others, have failed to demonstrate the advantages of programmed instruction.[7] According to R.A. Goldbeck and V.N. Campbell (1962), the need for students to make an overt response in each step and find out it is correct does not seem to be essential for efficient learning. Studies by P. Sturges (1972), W.J. Mc Keachie (1974) and J.M. Sassenrathe (1975) have revealed that immediate feedback is not always desirable.[8] In the

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[5] *Ibid.*, p. 193.
[6] *Ibid.*, p. 194.
[7] *Ibid.*, p. 196.
[8] Robert F. Biehler, *Psychology Applied to Teaching*, 3rd. ed. (Boston: Houghton Mifflin Co., 1978), p. 242.

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early 70's the government sponsored a number of performance contract agreements with private educational companies that were to use operant conditioning. The techniques, tried out under close to optimum conditions and evaluated with great objectivity and sophistication were proved less successful than had been expected.[9]

This evidence helps to make us more aware of the fact that the Operant Conditioning Theory explains some learning, but not all. In many instances, efforts to reinforce responses work with some people and not with others. Skinner assumes that a person doesn't need to want to learn in order to learn. "You just have to be persuaded to be put through the pattern of activity necessary for conditioning to take place".[10] Yet, teachers everywhere have been baffled by students who have gone through activities, been reinforced and supposedly have learned the material but in reality have not learned it. Many times, the teachers have been blamed for the failure without having considered that there might be other explanations for the failure of operant conditioning.

Part II

Kurt Lewin: Cognitive-Field

Kurt Lewin sees the learner as a "purposive person in simultaneous mutual interaction with his psychological environment, including other persons."[11] He developed his Field Theory as a theory of motivation and perception but eventually became concerned with its applications to learning situations. His theory of learning has come to be called Cognitive-Field Theory.

The most important assumption of Lewin's theory is that the behavior of a person results from the individual's life space. A person's life space consists of the way he/she perceives the environment at this particular moment taking into account what the person believes happened to him/her in the past and what he/she anticipates in the future. Reality, then, consists of the interpretations that a person

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[9] *Ibid.*, p. 253.

[10] Morris L. Bigge, "What Does Motivation Mean to S - R Associationists and Gestalt-Field Theorists?" In *Psychology Applied to Teaching: Selected Readings*, ed. Robert F. Biehler (New York: Houghton Mifflin Co., 1972), pp. 372-373.

[11] Bigge, *Learning*, p. 9.

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makes of himself/herself and of his/her surroundings as he/she interacts with them. This means that each person's perceptual environment is unique and that two equally intelligent persons, when confronted with the same situation, will differ drastically because each has different purposes and experiential background.[12] Because man perceives and interacts with the elements of the physical environment that are significant to him/her, those that are present but are ignored by the perceiver form the foreign hull. The foreign hull, according to Lewin, is that part of the environment outside the person's life space.

If man is seen as a purposive person, it is obvious that all intelligent human endeavor has a goal or purpose. A psychological tension system exists in a person's life whenever a need or intention appears. The release of tension may be achieved through reaching the desired goal or through restructuring one's life space, that is, through learning to see things differently.[13] The need or intention is seen as a psychological force or tendency called vector, that impulses one to act in a certain way or direction, either toward or away from a goal. This vector stems from the person, but is the result of how attractive or repelling an object or event appears to the person at that particular moment. Lewin says that the object or event has a positive valence if it is attractive and a negative valence if it is repulsive or if it prevents or obstructs the fulfillment of a goal or is perceived as threatening.

Learning is a dynamic process that occurs in the individual when there is "a change in the cognitive structure of, or insights in regard to, one's life space."[14] This means that the doing must be accompanied by a realization of the consequences. If there is no change in the life space, there is no learning, although overt behavior might seem to prove otherwise. Lewin criticizes Skinner's operant conditioning by saying that doing an unwanted act and obtaining a reward, in many instances, only makes the demanded activity more hated because it doesn't bring necessarily a change in desire or motivation.[15]

An insight is described as "a grasp of a situation that often goes deeper than words"[16], when suddenly everything makes sense and one

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[12] *Ibid.*, p. 69.

[13] Morris L. Bigge, "How Does Cognitive Field Psychology deal with Learning and Teaching?" in *Selected Readings*, *op. cit.*, p. 243.

[14] *Ibid.*

[15] Kurt Lewin, *Field Theory in Social Science*, Dorwin Cartwright, ed. (Connecticut: Greenwood Press Publishers, 1975), pp. 78-79.

[16] Bigge, *Learning Theories*, p. 208.

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becomes aware of a new pattern of relationships. The life space of the individual broadens because an object or event is perceived in a different way. Changes in cognitive structure occur through three processes: differentiation, generalization and restructurization. Differentiation takes place when one discerns more and more specific aspects and previously vague structured areas become more structured and specific. Generalization, on the other hand, implies becoming aware of relationships. Restructurization occurs when the meanings that objects or events have for a person are changed.[17]

Instead of responding to the learning situation in terms of specific, isolated stimuli, Lewin presents the learner as interacting with those elements of the environment that seem significant to him/her. He sees the motivation to learn as a combination of the needs that spring from the learner (vector) and the valence or meaning the activity has for him/her. Since it is impossible to predict exactly how any particular individual will develop insight, learning situations should be arranged to allow for variety in the ways students gain understanding. If facts are best learned when they are regarded by the learner as instruments for serving purposes which he/she feels are important, the teacher must try to understand or visualize the learner's life space. It is from the way a person behaves that we know what is present in his/her life space and teachers must sharpen their observations of children as well as ask them in informal conversations key questions that will help them to visualize the child's life space more clearly. They must develop a high level of empathy or sensitivity for the feelings and attitudes of children and not judge the children's behavior from their own life space. According to this Cognitive Field Learning Theory, the teacher should be concerned with producing personal involvement in the students, helping them to see a need to learn. Although the personal goals of the students are relevant, at times the teacher will help them to rethink their goals by giving them the opportunity to restructure their life spaces and gain new insights into their contemporaneous situations.[18] A Cognitive Field oriented teacher aspires to help students change their understanding of problems, objects or events and to bring into their life spaces that which remains in their foreign hull. "Unless a person sees some meaning in an object or

[17] Bigge, "How Does Cognitive Field ...", p. 258.
[18] Bigge, *Learning Theories*, p. 9.

event, he/she will pay little or no attention to it."[19] Something that has no meaning will be learned in a transitory and functionally useless way or will not be learned at all. Yet, we must not forget that meaning in this sense is equivalent to personal significance and not to understanding as some people might think. Understanding or insight will come as a result of the interaction between the learner and the region (activity, object or event) once the vector (need to reach the goal) and valence (attraction to the region) are established.

A change in cognitive structure may occur on the occasion of repeated experience, but not because of the repetition itself. Presenting facts in different situations or forms is more beneficial than providing the same type of drill or repetition because the learner will have the opportunity of being in contact with more than one situation, one of which might help to bring about insight. Mere repetition, if too frequent, leads to psychological satiation, and, as a result, what was meaningful will become meaningless, acquiring a negative valence (repulsion) and will lead to forgetting or will become unlearned.[20] Experiments have demonstrated that once satiated (goal reached, insight acquired) fatigue appears and most often it is largely a matter of psychological boredom and not physical tiredness.[21] This has great implications for teachers who many times are baffled by students who don't finish their work because of "fatigue" or "laziness", or who become inattentive or start making silly mistakes while the teacher is certain the student is capable of doing the work. From Lewin's point of view there are a lot of things that could be done to solve the problem.

An individual's self-concept is the product of his life space. Developing insights or restructuring one's life space can be a "double-edged blade" because perceiving a situation in negative terms can produce a negative valence toward anything resembling that situation as perceived by the individual. This could result in establishing barriers, in using diverse psychological mechanisms to flee from such situations, or in even placing it in the foreign hull. A teacher must therefore be conscious of his/her acts because, for example, "any time we negatively criticize a student's speech we are criticizing him."[22] This could create a problem for the teacher who at all times must try to remain in

[19] *Ibid.* p. 69.
[20] Lewin, *Field Theory*, p. 75.
[21] *Ibid.*, p. 217.
[22] Bigge, *Learning Theories*, p. 221.

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the student's life space with a positive valence if he/she is to help him/her grow and develop. Another instance is when a child has not succeeded in learning to read and the teacher must first create a positive valence for reading and then try to teach him/her to read.

Although Lewin's Cognitive Field Learning Theory provides us with some helpful implications for teaching, it has "little value in predicting what learning will occur under what conditions."[23]

Part III

Jean Piaget: Cognitive Development

Jean Piaget, a Swiss psychologist, devoted more than fifty years of his life to observing children and describing the nature of their intellectual growth. Out of those observations emerged his theory of Intellectual or Cognitive Development.

According to Piaget, thinking develops in a sequence of stages. "Each stage sees the elaboration of new mental abilities which set the limits and determine the character of what can be learned during that period. Piaget believes that the order at which the stages appear holds true for all children, but the ages at which the stages evolve will depend upon the native endowment of the child and upon the quality of the physical and social environment in which he is reared."[24] The intellectual processes that transform experiences into learning are assimilation and accomodation. Assimilation is the process by which elements in the environment are incorporated into the child's cognitive structure while accomodation is the process by which previous conceptions are modified and responses are therefore altered. After each accomodation there is assimilation, but assimilation could occur without accomodation. When children accomodate and assimilate experiences, an organized pattern or structure emerges which Piaget calls schema. "Piaget urges teachers to assume that children have a built in desire to learn because they are more or less impelled to make sense of what they observe and experience."[25] This urge produces disequilibrium and through the processes of accomodation and assimi-

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[23] Winfred Hill, *Learning: A Survey of Psychological Interpretations* (California: Chandler Publishing Co., 1963), p. 112.

[24] David Elkin, "Giant in the Nursery: Jean Piaget," in *Selected Readings*, *op. cit.*, p. 162.

[25] Bichler, *Psychology Applied*, p. 289.

lation equilibrium is achieved again.

The stages, according to this Theory of Cognitive Development, are as follows: Sensori-motor, from birth to 2 years; Pre-operational, from 2 to 7 years; Concrete-operational, from 7 to 11 years and Formal operational, from 11 on. Of particular interest to elementary school teachers are the Pre-operational and Concrete-operational stages.

The pre-operational stage is characterized by the appearance and use of language as symbolic representation of objects or events. It is important to understand that because at this stage children are egocentric, each word will have a personal meaning for each child, since they interpret and use words in terms of their own experience. They will center on only one thing or attribute at a time and are unable to take someone else's point of view. They assume all others perceive things as they perceive them. Children's thought at this time possesses two other characteristics which Piaget has called realism and animism. Realism is the fact that dreams, among other psychological events, are seen as physical realities. Thus, a child who has had a nightmare can't understand why his parents have not seen it. Animism is giving objects or events human characteristics and life. A child at this stage of development is unable to understand or grasp transformations. He/she pays attention to static states and is unable to see that each change has an inverse. This is called non-reversibility of thought. By age 7 he/she has developed some conservation structures and is becoming less dominated by mere perceptions.

Children in the concrete-operational stage are capable of mental operations restricted to concrete and direct experiences. They are unable to manipulate abstract ideas and, in areas about which they have acquired no direct knowledge, they reason by analogy to something they have experienced. They can decenter, observe transformation and can reverse. They are no longer so egocentric and are able to put themselves in another person's position and to take that person's point of view.

Piaget's research and his theory have great implications for the elementary school teacher. If children reason differently from adults, the teacher must try to see things from the child's point of view and not assume that because something is either obvious or logical the child will be able to grasp it. "The mind is not a mirror which is limited to reflecting the reality which is presented to it."[26] Knowledge doesn't

[26] Elkin, p. 156

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come from the outside but is the result of internal processes. Since words will have different meanings to different children, the teacher should ask pupils to explain what they mean by certain words and must provide ample opportunities for the students to explain their interpretations of experiences. This will not only help the teacher to see thing as they see them but will also help the students to familiarize themselves with other points of view. In many instances peer teaching will be more effective because a teacher might not be able to explain something in terms their pupils can understand. If the teacher realizes this, he/she can ask for assistance from another pupil that has grasped the explanation.

Assessing the level and type of thinking of each child in the class through interviews, observations and tasks developed specially for this purpose will be of incalculable value for the classroom teacher. Language is deceptive with respect to thought. Verbal facility exhibited by some youngsters might lead teachers to believe that they understand more than they actually do. On the other hand, lack of verbal facility, shyness or differences in ethnic or racial background has led many teachers to assume some children are in a lower stage of cognitive development than they really are. After assessing the students, a teacher will be better able to plan activities to help them in their cognitive development and to present material at their thinking level. In many instances teachers use verbal propositions that go over the heads of their pupils. Sometimes they expect children to understand metaphors and satires for which they are not ready until they reach formal operational thought. Teachers with concrete-operational children must remember that, although those children can reason logically, they can only do so about things they have experienced directly or about things they can relate by analogy to previous experiences. When introducing new material, the teacher must either provide them with opportunities to experience it directly or help them to see relationships between what they already know and the new material.

According to Piaget, learning through activity and direct experience is essential for pre-operational and concrete-operational children. "He maintains that learning is its own reward. Achieving equilibration will yield a feeling of satisfaction and there is no need for a reward."[27] Teachers should take advantage of the children's tendency

[27] Biehler, *Psychology Applied*, p. 289.

to find answers to problems that have personal significance to them by providing them with opportunities to choose many of their own learning experiences. But this doesn's mean to allow the child complete freedom of choice. A perceptive and sensitive teacher will provide the materials and activities that particular children need to grow and continue their development, but will then permit the child to explore and develop on his own. His/her function is that of a facilitator since he/she is unable to hasten nor force the growth as research studies have shown.

Piaget's findings about children's understanding of scientific and mathematical concepts, such as conservation, are being used as guidelines to revise curriculum offering in these areas.[28] He has been quoted as saying: "When adults try to impose mathematical concepts on a child prematurely, his learning is merely verbal; true understanding of them comes only with his own mental growth."[29]

Conclusion

Learning theories view man and learning from different perspectives. Although at time they seem contradictory, after careful analysis one realizes that each one explains some aspects of man. Man and his behavior is very complex and no theory explains neither man nor learning completely in a satisfactory fashion.

Piaget describes motivation as an innate desire to learn. Lewis adds that only meaningful situations (regions with positive valences) create this urge, agreeing with Piaget that it emanates from the person. Skinner appears to dismiss motivation as such by placing all the emphasis on the reinforcement that follows the action, yet agrees that motivation exists. He explains it as the result of previous conditioning, which a Lewinian would explain as the change that occured in the valence of a region which was previously negative and now is positive.

Learning is seen by Piaget as the result of accomodation and assimilation, which produces equilibrium and, to Lewin, this same occurrence is insight. To both, learning is an internal act. Skinner defines learning as a change in behavior that can be observed, yet he

[28] Elkin, p. 168.

[29] Jean Piaget, "How Children Form Mathematical Concepts," *Scientific American* 189(1953):76.

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admits that what is observed is not the learning, but the evidence that learning has occurred.

Skinner maintains that humans mirror the external environment in their perceptions, while both Piaget and Lewin disagree. Piaget explains that children perceive differently because they reason differently in each stage, yet he is never clear in whether adults perceive everything the same way or whether, although able to broaden their perspectives, they remain coloring their perceptions because of past experiences. Lewin presents as his fundamental assumption that each man has a dynamic yet unique life space, that is, that his/her perception of the environment is influenced by the way he/she sees his/her past and his/her future and this perception changes whenever there is learning.

Skinner firmly believes that learning or the appearance of certain behavior can be hastened or expedited by the teacher through the use of reinforcements.[10] Both Piaget and Lewin disagree. Since to them learning is an internal act, no outside forces can accelerate it. They would sustain that the overt behavior resulting is not necessarily proof that learning occurred. Teachers can facilitate learning but cannot force it.

All three, Piaget, Lewin and Skinner favor individualized instruction, but for different reasons, based on the assumptions of their theories. Skinner sees it as a necessary factor in order to provide direct reinforcement when the individual needs it. Lewin assumes each person's life space is unique, so learning must take those differences into consideration. Piaget urges teachers to permit children to explore and experience directly, in order to grow and develop intellectually. Since maturation and experiences, as well as intellectual endowment affect this development, it is essential that teaching be individualized, that is, geared to the needs of the particular child.

As we have seen diverse learning theories offer different views of man and the way he/she acquires knowledge. Each theory does this by offering us various assumptions. Teachers must use common sense and their own experiences in deciding whether to accept or reject an assumption. But they must be open to analyze them conscientiously, not rushing to reach conclusions blindly and impulsively. They must be willing to change their decision if at a later time they realize it was

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[10] B.F. Skinner, "The Technology of Teaching" in *Selected Readings*, *op. cit.*, p. 214.

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not the most appropriate choice.

Familiarizing ourselves with theories of learning permits us to identify the origin of an educational trend or approach relating it to an assumption from a particular theory. We can then verify its validity according to that theory. Accepting some of the assumptions of a theory implies deciding to use classroom practices in accordance with those assumptions or modifying current practices. It also means discarding practices that are objectionable to the assumptions. Before doing either, we must be certain of what we are doing.

Research results can aid us in making decisions, but we must look critically at research studies because in the behavioral sciences it is impossible to control all the variables. Usually, those factors being studied are the only ones taken into consideration and the results that supposedly give evidence to an assumption could have been obtained because of another factor. Statistics don't prove anything. They merely demonstrate that there is not enough evidence to reject an assumption.

Different theories enable us to examine a problem or situation from different perspectives. This will permit the teacher to find answers. If one practice doesn't work, analyze the assumptions behind it, look at what another theory says about it and try another approach.

After examining various theories, schooling and the role of the teacher are seen as including more than just the mechanical giving of information. We begin to understand and visualize all the implications and ramifications of our choices and actions, not only in the lives of our students but in the lives of those who interact with them.

Let us continue to explore the various ways children and learning have been conceptualized remembering that if

> "All people perceive the world through the idiosyncratic filter of their personal experience."[31]

we as teachers must make an effort to broaden our own conceptions, because we have in our hands a great responsibility: helping children to become mature, well-balanced and happy individuals who are able to function effectively in our society.

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[31] A. Rogawski, *Personnel and Guidance Journal*, 56, p. 325.